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(54) Title: OVEREXPRESSION IN YEAST AND PLANTS OF A GENE ENCODING GLYCEROL 3-PHOSPHATE ACYL-
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(57) Abstract: The invention provides a method for increasing the triacylglyceride content of an organism, and/or for modifying the fatty acid composition of the triacylglyceride, by expressing in the organism a DNA encoding a protein having glycerol 3-phosphate acyltransferase (GPAT) activity. Preferred examples of the method of the invention are illustrated with *Arabidopsis thaliana* and yeast, using constructs prepared from the plastidial GPAT genes from Safflower and E.Coli.

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